

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/572,175

Source: 1FWP

Date Processed by STIC: 4/10/06

ENTERED

IFWP

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/572,175

DATE: 04/10/2006

TIME: 10:39:00

Input Set : A:\LeA 36 839.ST25.txt

Output Set: N:\CRF4\04102006\J572175.raw

3 <110> APPLICANT: Bayer HealthCare AG
4 Golz, Stefan
5 Markova, Svetlana
6 Burakova, Ludmila
7 Frank, Ludmila
8 Vysotski, Eugene
10 <120> TITLE OF INVENTION: Isolated Photoprotein mtClytin, and the Use Thereof
12 <130> FILE REFERENCE: LeA 36 839
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/572,175
C--> 14 <141> CURRENT FILING DATE: 2006-03-16
14 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/009843
15 <151> PRIOR FILING DATE: 2004-09-03
17 <150> PRIOR APPLICATION NUMBER: DE10342670.1
18 <151> PRIOR FILING DATE: 2003-09-16
20 <160> NUMBER OF SEQ ID NOS: 9
22 <170> SOFTWARE: PatentIn version 3.3
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 912
26 <212> TYPE: DNA
27 <213> ORGANISM: Clytia gregaria
29 <400> SEQUENCE: 1
30 gacagataaa aaattcactc cttagattat ttagtgaata agagaaaaaa aggataagaa 60
32 atcaagatgc aaaggtttac aaatcgtctt ctttccatgt cggcttttacg tgcaagatca 120
34 agattgcaac gcacggcaaa ttttcacacc agcatactct tggctacaga ttcaaaatac 180
36 gcggtcaaac tcgatacctga ttttgcaa at ccaaaatgga tcaacagaca caaatattatg 240
38 ttcaactttt tggacataaa cggtaagggg aaaatcacat tagatgaaat cgtctccaaa 300
40 gcttcagacg acatttgtgc taaactggat gcaacaccag aacagaccaa acgtcaccag 360
42 gatgctgttg aagccttttt caagaaaatg ggcatggatt atggtaaaga agttgcattc 420
44 ccagaattta ttaagggatg ggaagagttg gccgaacacg acttggaact ctggtctcaa 480
46 aacaaaagta cattgatccg tgaatgggga gatgctgttt tcgacatttt cgacaaagac 540
48 gcaagtggct caatcagttt agacgaatgg aaggcttacg gacgaatctc tggaatctgt 600
50 ccatcagacg aagacgctga gaagacgttc aaacattgtg atttggacaa cagtggcaaa 660
52 cttgatgttg atgagatgac caggcaacat ttaggcttct ggtacacatt ggatccaact 720
54 tctgatggtc tttatggcaa ttttgttccc taagaagcgt tcagttaaaa acgctaaaca 780
56 ttgttcagtt gtaaaattat attcattttc atttcgtaaa attagtattt ataaatttgt 840
58 atcataaatt gtatccatgt tgtagactaa ataagactcg gcaaaaaaaa aaaaaaaaaa 900
60 aaaaaaaaaa aa 912
63 <210> SEQ ID NO: 2
64 <211> LENGTH: 228
65 <212> TYPE: PRT
66 <213> ORGANISM: Clytia gregaria
68 <400> SEQUENCE: 2
70 Met Gln Arg Phe Thr Asn Arg Leu Leu Ser Met Ser Ala Leu Arg Ala

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/572,175

DATE: 04/10/2006

TIME: 10:39:00

Input Set : A:\LeA 36 839.ST25.txt

Output Set: N:\CRF4\04102006\J572175.raw

```

71 1          5          10          15
74 Arg Ser Arg Leu Gln Arg Thr Ala Asn Phe His Thr Ser Ile Leu Leu
75          20          25          30
78 Ala Thr Asp Ser Lys Tyr Ala Val Lys Leu Asp Pro Asp Phe Ala Asn
79          35          40          45
82 Pro Lys Trp Ile Asn Arg His Lys Phe Met Phe Asn Phe Leu Asp Ile
83          50          55          60
86 Asn Gly Lys Gly Lys Ile Thr Leu Asp Glu Ile Val Ser Lys Ala Ser
87 65          70          75          80
90 Asp Asp Ile Cys Ala Lys Leu Asp Ala Thr Pro Glu Gln Thr Lys Arg
91          85          90          95
94 His Gln Asp Ala Val Glu Ala Phe Phe Lys Lys Met Gly Met Asp Tyr
95          100          105          110
98 Gly Lys Glu Val Ala Phe Pro Glu Phe Ile Lys Gly Trp Glu Glu Leu
99          115          120          125
102 Ala Glu His Asp Leu Glu Leu Trp Ser Gln Asn Lys Ser Thr Leu Ile
103          130          135          140
106 Arg Glu Trp Gly Asp Ala Val Phe Asp Ile Phe Asp Lys Asp Ala Ser
107 145          150          155          160
110 Gly Ser Ile Ser Leu Asp Glu Trp Lys Ala Tyr Gly Arg Ile Ser Gly
111          165          170          175
114 Ile Cys Pro Ser Asp Glu Asp Ala Glu Lys Thr Phe Lys His Cys Asp
115          180          185          190
118 Leu Asp Asn Ser Gly Lys Leu Asp Val Asp Glu Met Thr Arg Gln His
119          195          200          205
122 Leu Gly Phe Trp Tyr Thr Leu Asp Pro Thr Ser Asp Gly Leu Tyr Gly
123          210          215          220
126 Asn Phe Val Pro
127 225
130 <210> SEQ ID NO: 3
131 <211> LENGTH: 16
132 <212> TYPE: PRT
133 <213> ORGANISM: Clytia gregaria
135 <400> SEQUENCE: 3
137 Met Gln Arg Phe Thr Asn Arg Leu Leu Ser Met Ser Ala Leu Arg Ala
138 1          5          10          15
141 <210> SEQ ID NO: 4
142 <211> LENGTH: 48
143 <212> TYPE: DNA
144 <213> ORGANISM: Clytia gregaria
146 <400> SEQUENCE: 4
147 atgcaaaggt ttacaaatcg tcttctttcc atgtcggctt tacgtgca 48
150 <210> SEQ ID NO: 5
151 <211> LENGTH: 791
152 <212> TYPE: DNA
153 <213> ORGANISM: Clytia gregaria
155 <400> SEQUENCE: 5
156 gatctcagct caacttgcaa taagtatcag atcaaatttt gcaactcaaa gcaaatcatc 60
158 aacttcatca taatgactga cactgcttca aaatacgctg tcaaactcaa gaccaacttt 120

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/572,175

DATE: 04/10/2006

TIME: 10:39:00

Input Set : A:\LeA 36 839.ST25.txt

Output Set: N:\CRF4\04102006\J572175.raw

```

160 gaagatccaa aatgggtcaa cagacacaaa tttatgttca acttttttga cattaacggc 180
162 aacggaaaaa tcacttttga tgaaattgtc tccaaagctt cggatgacat ttgcgccaaa 240
164 cttggagcta caccagctca aacccaacgt catcaggaag ctgttgaagc tttcttcaag 300
166 aagattgggt tggattatgg caaagaagtc gaattcccag ctttcgttaa cggatggaaa 360
168 gaactggcca aacatgactt gaaactttgg tcccaaaaaca agaaatcttt gatccgcaat 420
170 tgggggagaag ctgtattcga catttttcgac aaggacggaa gtggctcaat cagtttggac 480
172 gaatggaaaa catacggagg aatctcttga atctgtccat cagacgaaga cgctgaaaag 540
174 accttcaaac attgcgattt ggacaacagt ggcaaacttg atgttgacga gatgaccaga 600
176 caacatttgg gattctggta caccttggac cctaacgctg atggctctta tggcaacttt 660
178 gtcccttaaa aacttttttt gctgtaaatt ctttacgggt tattttttca taattgtcat 720
180 ttgattttta ctttgtttcg gaaaatgaaa aatattcttt attcagaaaa aaaaaaaaaa 780
182 aaaaaaaaaa a 791

```

185 <210> SEQ ID NO: 6

186 <211> LENGTH: 198

187 <212> TYPE: PRT

188 <213> ORGANISM: Clytia gregaria

190 <400> SEQUENCE: 6

```

192 Met Thr Asp Thr Ala Ser Lys Tyr Ala Val Lys Leu Lys Thr Asn Phe
193 1 5 10 15
196 Glu Asp Pro Lys Trp Val Asn Arg His Lys Phe Met Phe Asn Phe Leu
197 20 25 30
200 Asp Ile Asn Gly Asn Gly Lys Ile Thr Leu Asp Glu Ile Val Ser Lys
201 35 40 45
204 Ala Ser Asp Asp Ile Cys Ala Lys Leu Gly Ala Thr Pro Ala Gln Thr
205 50 55 60
208 Gln Arg His Gln Glu Ala Val Glu Ala Phe Phe Lys Lys Ile Gly Leu
209 65 70 75 80
212 Asp Tyr Gly Lys Glu Val Glu Phe Pro Ala Phe Val Asn Gly Trp Lys
213 85 90 95
216 Glu Leu Ala Lys His Asp Leu Lys Leu Trp Ser Gln Asn Lys Lys Ser
217 100 105 110
220 Leu Ile Arg Asn Trp Gly Glu Ala Val Phe Asp Ile Phe Asp Lys Asp
221 115 120 125
224 Gly Ser Gly Ser Ile Ser Leu Asp Glu Trp Lys Thr Tyr Gly Gly Ile
225 130 135 140
228 Ser Gly Ile Cys Pro Ser Asp Glu Asp Ala Glu Lys Thr Phe Lys His
229 145 150 155 160
232 Cys Asp Leu Asp Asn Ser Gly Lys Leu Asp Val Asp Glu Met Thr Arg
233 165 170 175
236 Gln His Leu Gly Phe Trp Tyr Thr Leu Asp Pro Asn Ala Asp Gly Leu
237 180 185 190

```

240 Tyr Gly Asn Phe Val Pro

241 195

244 <210> SEQ ID NO: 7

245 <211> LENGTH: 747

246 <212> TYPE: DNA

247 <213> ORGANISM: Clytia gregaria

249 <400> SEQUENCE: 7

```

250 atcaactttt gcaactcaaa gcaaatttca aaacttcaac atggctgaca ctgcatcaaa 60

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/572,175

DATE: 04/10/2006

TIME: 10:39:00

Input Set : A:\LeA 36 839.ST25.txt

Output Set: N:\CRF4\04102006\J572175.raw

```

252 atacgccgtc aaactcagac ccaacttcga caacccaaaa tgggtcaaca gacacaaatt 120
254 tatgttcaac tttttggaca ttaacggcga cggaaaaatc actttggatg aaatcgtctc 180
256 caaagcttcg gatgacattt gcgccaaact tggagcaaca ccagaacaga ccaaacgtca 240
258 ccaggatgct gtcgaagctt tcttcaaaaa gattggtatg gattatggta aagaagtcga 300
260 attcccagct tttgttgatg gatggaaaga actggccaat tatgacttga aactttggtc 360
262 tcaaaacaag aaatctttga tccgcgactg gggagaagct gttttcgaca tttttgacaa 420
264 agacggaagt ggctcaatca gtttggacga atggaaggct tatggacgaa tctctggaat 480
266 ctgctcatca gacgaagacg ccgaaaagac cttcaaacat tgcgatttgg acaacagtgg 540
268 caaacttgat gttgatgaga tgaccagaca acatttggga ttctggtaca ccttggaccc 600
270 caacgctgat ggtctttacg gcaattttgt tccttaaaca tcgaaacaaa agcccaaaag 660
272 aagttttgga agaattattt gatactatca tttgttacta tttcgtaaca tgctatatatt 720
274 tgtaacatgc tatattttaa taattttt 747

```

277 <210> SEQ ID NO: 8

278 <211> LENGTH: 198

279 <212> TYPE: PRT

280 <213> ORGANISM: Clytia gregaria

282 <400> SEQUENCE: 8

```

284 Met Ala Asp Thr Ala Ser Lys Tyr Ala Val Lys Leu Arg Pro Asn Phe
285 1 5 10 15
288 Asp Asn Pro Lys Trp Val Asn Arg His Lys Phe Met Phe Asn Phe Leu
289 20 25 30
292 Asp Ile Asn Gly Asp Gly Lys Ile Thr Leu Asp Glu Ile Val Ser Lys
293 35 40 45
296 Ala Ser Asp Asp Ile Cys Ala Lys Leu Gly Ala Thr Pro Glu Gln Thr
297 50 55 60
300 Lys Arg His Gln Asp Ala Val Glu Ala Phe Phe Lys Lys Ile Gly Met
301 65 70 75 80
304 Asp Tyr Gly Lys Glu Val Glu Phe Pro Ala Phe Val Asp Gly Trp Lys
305 85 90 95
308 Glu Leu Ala Asn Tyr Asp Leu Lys Leu Trp Ser Gln Asn Lys Lys Ser
309 100 105 110
312 Leu Ile Arg Asp Trp Gly Glu Ala Val Phe Asp Ile Phe Asp Lys Asp
313 115 120 125
316 Gly Ser Gly Ser Ile Ser Leu Asp Glu Trp Lys Ala Tyr Gly Arg Ile
317 130 135 140
320 Ser Gly Ile Cys Ser Ser Asp Glu Asp Ala Glu Lys Thr Phe Lys His
321 145 150 155 160
324 Cys Asp Leu Asp Asn Ser Gly Lys Leu Asp Val Asp Glu Met Thr Arg
325 165 170 175
328 Gln His Leu Gly Phe Trp Tyr Thr Leu Asp Pro Asn Ala Asp Gly Leu
329 180 185 190
332 Tyr Gly Asn Phe Val Pro
333 195

```

336 <210> SEQ ID NO: 9

337 <211> LENGTH: 198

338 <212> TYPE: PRT

339 <213> ORGANISM: Clytia gregaria

341 <400> SEQUENCE: 9

343 Met Thr Asp Thr Ala Ser Lys Tyr Ala Val Lys Leu Lys Thr Asn Phe

RAW SEQUENCE LISTING

DATE: 04/10/2006

PATENT APPLICATION: US/10/572,175

TIME: 10:39:00

Input Set : A:\LeA 36 839.ST25.txt

Output Set: N:\CRF4\04102006\J572175.raw

```

344 1          5          10          15
347 Glu Asp Pro Lys Trp Val Asn Arg His Lys Phe Met Phe Asn Phe Leu
348          20          25          30
351 Asp Ile Asn Gly Asn Gly Lys Ile Thr Leu Asp Glu Ile Val Ser Lys
352          35          40          45
355 Ala Ser Asp Asp Ile Cys Ala Lys Leu Gly Ala Thr Pro Ala Gln Thr
356          50          55          60
359 Gln Arg His Gln Glu Ala Val Glu Ala Phe Phe Lys Lys Ile Gly Leu
360 65          70          75          80
363 Asp Tyr Gly Lys Glu Val Glu Phe Pro Ala Phe Val Asn Gly Trp Lys
364          85          90          95
367 Glu Leu Ala Lys His Asp Leu Lys Leu Trp Ser Gln Asn Lys Lys Ser
368          100          105          110
371 Leu Ile Arg Asn Trp Gly Glu Ala Val Phe Asp Ile Phe Asp Lys Asp
372          115          120          125
375 Gly Ser Gly Ser Ile Ser Leu Asp Glu Trp Lys Thr Tyr Gly Gly Ile
376          130          135          140
379 Ser Gly Ile Cys Pro Ser Asp Glu Asp Ala Glu Lys Thr Phe Lys His
380 145          150          155          160
383 Cys Asp Leu Asp Asn Ser Gly Lys Leu Asp Val Asp Glu Met Thr Arg
384          165          170          175
387 Gln His Leu Gly Phe Trp Tyr Thr Leu Asp Pro Asn Ala Asp Gly Leu
388          180          185          190
391 Tyr Gly Asn Phe Val Pro
392          195

```

VERIFICATION SUMMARY

DATE: 04/10/2006

PATENT APPLICATION: US/10/572,175

TIME: 10:39:01

Input Set : A:\LeA 36 839.ST25.txt

Output Set: N:\CRF4\04102006\J572175.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application No

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date